

U.S. Patent Application Serial No. 10/030,126
Response filed September 1, 2004
Reply to OA dated June 3, 2004

REMARKS:

Claims 1 and 2 are currently being examined, of which claim 1 has been amended. No new claims have been added. It is respectfully submitted that no new matter has been introduced.

The Examiner has objected to claims 1 and 2 for various informalities. Claim 1 has been amended to remove informalities. Thus, Applicants respectfully request that this objection be withdrawn.

Claims 1 and 2 stand rejected under 35 USC 102(b) as anticipated by USP 5,902,534 (**Fujishiro**).

Applicants respectfully traverse this rejection.

Initially, one might possibly believe that the gist of the **Fujishiro** disclosure is depicted in the introduction of the coating material, as in step (b) shown in the Abstract. However, based on a careful study of the entire **Fujishiro** disclosure, the true gist of the **Fujishiro** disclosure is more likely to be represented by step (c) in **Fujishiro**'s claim 1. That is, in **Fujishiro**, the coating material is injected when the pressure to be applied to the cavity after the injection of the thermoplastic molten resin is completed becomes zero. In this respect, please see the statement on column 4, lines

U.S. Patent Application Serial No. **10/030,126**
Response filed September 1, 2004
Reply to OA dated June 3, 2004

13 to 32 of **Fujishiro**.

Thus, the disclosure of **Fujishiro** is mainly directed to a coating material being injected when there is zero pressure applied to the cavity (after the injection of the thermoplastic molten resin is completed). The zero pressure is one of the key aspects of the **Fujishiro** disclosure.

On the contrary, in the present invention as set forth in claims 1 and 2, the initiation of the injection of the coating material starts when the surface of the injected molded resin becomes the state that it can withstand the injection pressure of the coating material. Claim 1, as amended, sets forth “injection of a coating material is performed only after a time period has passed which is necessary for the surface of the thermoplastic resin molded product to be cured to such an extent that said surface can withstand an injection pressure of the coating material and a flowing pressure of said coating material”.

That is, according to the features set forth in claim 1, there is no need to wait for the time when the pressure to be applied to the cavity after the injection of the thermoplastic molten resin is completed becomes zero.

This feature of the present invention is an aspect which could be significantly advantageous

U.S. Patent Application Serial No. 10/030,126
Response filed September 1, 2004
Reply to OA dated June 3, 2004

over **Fujishiro** because it could shorten the time required for the completion of the whole steps. Please see the text on page 104 (last two lines) and page 105 (lines 1-9) of the specification of the present invention. On the contrary, in **Fujishiro**, there is no description as to the improvement in the efficiency of the process of **Fujishiro**.

Fujishiro fails to describe, teach, or suggest the following features of claim 1, as amended: “injection of a coating material is performed only after a time period has passed which is necessary for the surface of the thermoplastic resin molded product to be cured to such an extent that said surface can withstand an injection pressure of the coating material and a flowing pressure of said coating material” in combination with the other claimed features.

Furthermore, the technical concept of the present invention is entirely different from that of **Fujishiro**.

Fujishiro does not teach the importance in controlling continuously the mold position and mold closing control in simultaneous manner wherein thermoplastic resin is used for a core material. Please see the text from page 8, line 9 to page 9, line 5 of the specification of the present invention.

U.S. Patent Application Serial No. 10/030,126
Response filed September 1, 2004
Reply to OA dated June 3, 2004

The Examiner cited and relied upon a portion of **Fujishiro** on column 5, lines 11 to 21, and suggested that the conditions described therein disclose features of claims 1 and 2 of the present invention, regarding injection of a coating material after a time period for the thermoplastic resin surface to withstand an injection pressure of the coating material.

However, that portion (col. 5, lines 11-21) of **Fujishiro** has been studied, and it does not appear to disclose the features of claims 1 and 2 of the present invention relating to “injection of a coating material is performed only after a time period has passed which is necessary for the surface of the thermoplastic resin molded product to be cured to such an extent that said surface can withstand an injection pressure of the coating material and a flowing pressure of said coating material”.

Also, **Fujishiro** does not teach the positive retraction of the movable mold to form the space for the injection of the coating material, as can be taken from the statement on column 4, line 63 to column 5, line 10 of **Fujishiro**. That is, **Fujishiro** fails to teach the positive retraction of the movable mold in any means before the initiation of the injection of the coating material.

Additionally, please note that page 33, line 15 to page 34, line 3 of the specification of the present invention relates to the following: that a standard for judgment on the state wherein the surface of the injected resin can withstand the injection pressure of a coating material of the injected

U.S. Patent Application Serial No. 10/030,126
Response filed September 1, 2004
Reply to OA dated June 3, 2004

resin is a heat distortion temperature when the thermoplastic resin is amorphous, and that for the crystalline type thermoplastic resin is a crystalline temperature. **Fujishiro** fails to describe, teach, or suggest such features.

Fujishiro is silent as to the length of time to be required for the injection of a coating material and the completion timing of the reclosing step, defined in terms of gelling time of a resin to be used as a coating material. Thus, **Fujishiro** fails to describe, teach, or suggest the following features of claim 1, as amended: “a time period from beginning of injection of the coating material to its spreading through an interior of the mold by **reclosure** of the mold is set to be within a range wherein t_1 has the same meaning as defined above” in combination with the other claimed features.

The criticality of those parameters set forth in claim 1 has been demonstrated in Example 1 and Comparative Examples 1 and 2 of the present invention. **Fujishiro** is silent as to such a criticality.

In view of the foregoing, **Fujishiro** fails to describe, teach, or suggest the following features of claim 1, as amended: “injection of a coating material is performed only after a time period has passed which is necessary for the surface of the thermoplastic resin molded product to be cured to such an extent that said surface can withstand an injection pressure of the coating material and a

U.S. Patent Application Serial No. 10/030,126
Response filed September 1, 2004
Reply to OA dated June 3, 2004

flowing pressure of said coating material” in combination with the other claimed features.

Additionally, **Fujishiro** fails to describe, teach, or suggest the following features of claim 1, as amended: “a time period from beginning of injection of the coating material to its spreading through an interior of the mold by **reclosure** of the mold is set to be within a range wherein t_1 has the same meaning as defined above” in combination with the other claimed features.

Thus, Applicants respectfully submit that this rejection should be withdrawn.

The first sentence of the specification has been amended to include a specific reference to the prior application.

In view of the aforementioned amendments and accompanying remarks, claims are in condition for allowance, which action, at an early date, is requested.

U.S. Patent Application Serial No. **10/030,126**
Response filed September 1, 2004
Reply to OA dated June 3, 2004

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

ARMSTRONG, KRATZ, QUINTOS,
HANSON & BROOKS, LLP



Darren R. Crew
Attorney for Applicants
Reg. No. 37,806

DRC/llf
Atty. Docket No. **011785**
Suite 1000
1725 K Street, N.W.
Washington, D.C. 20006
(202) 659-2930



23850

PATENT TRADEMARK OFFICE